

Title (en)
APPARATUS AND METHOD FOR CUTOFF MACHINING SINTERED MAGNETS

Title (de)
VORRICHTUNG UND VERFAHREN ZUR SPANABHEBENDEN BEARBEITUNG VON GESINTERTEN MAGNETEN

Title (fr)
APPAREIL ET PROCÉDÉ D'USINAGE POUR LA COUPE D'AIMANTS FRITTÉS

Publication
EP 3406380 A1 20181128 (EN)

Application
EP 18173038 A 20180517

Priority
JP 2017104336 A 20170526

Abstract (en)
A sintered magnet sawing apparatus is provided comprising a cylindrical work carrier mounted on a horizontal rotating spindle and having a regular polygonal shape in a perpendicular cross section, and a plurality of endless elastic belts adapted to force a work of sintered magnet against the carrier surface to secure the work thereto and adapted to travel synchronously with and counter to the rotation of the carrier in a circulatory manner. In accordance with rotation of the carrier, the work is delivered to the peripheral surface of the carrier, secured thereto by the elastic belts, moved further forward and cutoff machined by an outer cutoff blade. The divided work is moved further forward, released and discharged from the carrier.

IPC 8 full level
B23D 47/04 (2006.01); **B28D 1/04** (2006.01); **B28D 7/04** (2006.01)

CPC (source: CN EP US)
B23D 47/047 (2013.01 - EP US); **B24B 27/06** (2013.01 - CN); **B24B 27/0675** (2013.01 - EP US); **B24B 41/005** (2013.01 - CN); **B24B 41/06** (2013.01 - CN); **B24B 47/20** (2013.01 - EP US); **B24B 55/02** (2013.01 - CN); **B28D 1/04** (2013.01 - EP US); **B28D 1/24** (2013.01 - CN); **B28D 7/02** (2013.01 - CN); **B28D 7/04** (2013.01 - CN EP US)

Citation (applicant)
• JP 2010110850 A 20100520 - SHINETSU CHEMICAL CO
• JP 2010110851 A 20100520 - SHINETSU CHEMICAL CO
• JP 2010110966 A 20100520 - SHINETSU CHEMICAL CO
• JP 2011156655 A 20110818 - SHINETSU CHEMICAL CO
• JP 2011156863 A 20110818 - SHINETSU CHEMICAL CO
• JP 2012000708 A 20120105 - SHINETSU CHEMICAL CO
• US 2011312255 A1 20111222 - AKADA KAZUHITO [JP], et al

Citation (search report)
• [YA] US 3797338 A 19740319 - MOLNAR M
• [YA] CH 175598 A 19350315 - MEULI SCHMIDWEBER & CO [CH]
• [A] US 3122043 A 19640225 - VICTOR SHANOK, et al
• [A] NL 7901893 A 19800910 - MATTIJSEN BV MASCHF
• [A] EP 0515333 A1 19921125 - ANDREUCCI FRANCO [IT], et al

Cited by
CN110466991A; CN111716571A

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 3406380 A1 20181128; EP 3406380 B1 20201223; CN 108942644 A 20181207; CN 108942644 B 20220510; CN 114700875 A 20220705; JP 2018199177 A 20181220; JP 6772959 B2 20201021; MY 191928 A 20220718; PH 12018000143 A1 20191028; SG 10201804339U A 20181228; US 11185958 B2 20211130; US 11701748 B2 20230718; US 2018339391 A1 20181129; US 2022063049 A1 20220303

DOCDB simple family (application)
EP 18173038 A 20180517; CN 201810512519 A 20180525; CN 202210461405 A 20180525; JP 2017104336 A 20170526; MY PI2018701849 A 20180515; PH 12018000143 A 20180523; SG 10201804339U A 20180522; US 201815980013 A 20180515; US 202117510756 A 20211026